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THE DEVELOPMENT OF METHODS IN TEACHING MODERN ELEMENTARY GEOGRAPHY

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INTRODUCTION

Since 1600 modern school geography has passed through three distinct periods. First, geography is a study of charts and maps for the purpose of locating land and water forms. These early geographies also included a considerable body of descriptive matter relating to these typical land and water forms, and in addition to these descriptions, some statements are made about the plants, animals and races of men. It is probable that this early geography grew out of the ancient astronomical geography which had been taught in the universities for centuries. At any rate this unorganized, unscientific type of geography prevailed till about 1800.

In the second period, physiography is made the important factor underlying geography. This change occurs after Ritter begins the study and teaching of geography in the University of Berlin. In his theory and teaching, geography is made a science which treats of the earth and its inhabitants, and very soon his theories are adopted in both Europe and America. Moreover, they continue to be dominating ideals till the close of the nineteenth century.

The third period may be called the period of industrial or economic geography. During the last decade we have heard a great deal about this form of geography—this is a perfectly natural tendency in that it is taking some of the emphasis off the physiographical aspects of geography and putting more on the problems growing out of human relations.

The paper will take up in turn these periods, devoting a brief discussion to the early period which will include the development

of methods as they grow out of Pestalozzi's experiments supplemented by those of his disciples. A much larger place will be devoted to the discussion of Ritter's theories and the practice growing out of them. His influence will be traced directly through his own teaching and that of his pupils and followers. Finally a brief discussion will be undertaken of the present situation with regard to the attempts to make industry the basis of geography. The plan is to take up the development of method as it goes on in Europe first, and then trace the development for the United States. In both cases the discussion will follow the periods which have been noted above.

I. THE DEVELOPMENT OF METHODS OF TEACHING GEOGRAPHY IN EUROPE

1. *Place and Book Geography*

To show that this type of geography prevailed during the seventeenth and eighteenth centuries it is only necessary to take up the writings of some of the more important reformers during these centuries. We find all the reformers protesting against the study of such geography, and most of them offer suggestions as to what they think should be taught instead of the material that is being used.

Comenius (1592-1670) was among the first to advocate a change to a more rational method of study and the selection of more valuable material for that study. He suggests that the child should get very early a good knowledge of natural things, such as plants, trees, flowers, sand, clay, the cow, the horse, and the dog. He says, "In the fourth and following years the child should be taken into the fields and along the rivers and should travel to observe plants and animals, running water, and the turning of windmills."¹ Further, he thinks the study of geography should begin at the cradle. At once the child should be taught direction, location, and distance of the parts of the house, such as the nursery, kitchen, bed-chamber. Very early, too, the children should have much outdoor observation in geography, namely, visits to orchards; should be taught to find their way along the streets, and learn where their friends and relations live.

Rousseau (1712-78) thought the geography of his time was practically worthless, for it consisted only in the formal study of globes and maps which inadequately represented the important things needed by Emile. He insisted that Emile should begin the study of geography by getting a correct knowledge of his immediate neighborhood and if any maps were to be used they should be drawn by the child. He thought mere names of places and facts were of no value, but that objects should be studied first-hand, as a matter of experience.²

Pestalozzi (1746-1827) was another of the reformers whose indirect influence on the method of teaching geography was very great, though he knew very little about the subject himself. DeGuimps says:

The first elements of geography were taught us from the land itself. We were first taken to a narrow valley not far from Yverdun, where the river Buron runs. After taking a general view of the valley we were made to examine the details until we had obtained an exact and complete idea of it. We were then told to take some of the clay which lay in beds on one side of the valley and fill the baskets which we had brought along for the purpose. On our return to the castle we took our places at the long tables and reproduced in relief the valley we had just studied, each one doing the part which had been allotted to him. In the course of the next few days more walks and more explorations, each day on higher ground, and each time with a further extension of our work. Only when our relief was finished were we shown the map which by this means we did not see till we were in a position to understand it.³

This is home geography, *Heimatskunde*, which according to Monroe was one of the striking Pestalozzian innovations. However, when we read Barnard's account⁴ of the methods of instruction advocated by Pestalozzi we are forced to conclude that he was after all not far from place and book geography. For example, Pestalozzi says:

Thus, for instance, one of the subdivisions of Europe is Germany. Let the child first become acquainted beyond the power of forgetting them with the subdivisions of Germany into ten circles. Now let the names of the cities of Germany be laid before him in alphabetical order to be read; there being at the name of each city a number of the circle in which it lies. As soon as he can read the names of the cities fluently let him be

shown how the numbers annexed to them refer to the heads above and the child will after a few lessons be able to locate all the cities of Germany according to the heads thus set above them. Let there be put before him, for instance, the following German places, with figures: Aachen⁸, Aalen⁹, Abendburg⁴, Acken¹⁰, etc. Then the pupil will read as follows: Aachen is in the Westphalian circle, Abendburg is in the Franconian circle, etc.⁴

Krüsi, in discussing the application of Pestalozzi's methods, says:

In his efforts to systematize geography, Pestalozzi seems to have violated the principles of a sound system of instruction. This resulted from an undue attention on the alphabetical end, and therefore arbitrary arrangement of geographical names, which he wished to impress upon the mind, or rather upon the memories, of the pupils. He evidently had not at that time a correct conception of the true office and purpose of geography.⁵

This confirms the view that Pestalozzi's contribution in the matter of method in teaching geography was indirect, growing out of his principles of education, rather than directly stated or practiced in any of his teaching. His work consisted in giving the point of view and inspiration for such men as Krüsi, Niederer, Plaman, Tobler, Zeller, Fellenberg, von Raumer, and particularly Karl Ritter, the greatest of all German geographers. Ritter himself says:

Pestalozzi knew less of geography than a child in one of our primary schools, yet it was from him that I gained my chief knowledge of this science, for it was in listening to him that I first conceived the idea of the natural method. It was he who opened the way for me and I take pleasure in attributing whatever value my work may possess entirely to him.

It is doubtful whether we should take this statement of Ritter's too seriously. For its parts are contradictory. First he says that Pestalozzi knew very little geography, and then he says that he owes all to him. A fair estimate of the matter would seem to be that Ritter really formed the purpose to make the scientific study and teaching of geography his life-work while under the personal influence and enthusiasm of Pestalozzi, and he felt profoundly grateful to Pestalozzi for helping him to reach this very important decision.

Another reformer, Karl von Raumer (1783-1865), attempted

some experiments in geography-teaching. He was familiar with the theories of Rousseau and wanted to work them out, but he was also directly a follower of Pestalozzi and his method. These experiments of his, then, are tried as the result of his adoption of the theories of both Rousseau and Pestalozzi. Moreover, they represent a direct protest against the kind of geography taught during his time. The inadequacy of place and book geography is pointed out first by means of an imaginary dialogue between two boys, Otto and George, written by von Raumer. Pestalozzi's method of instruction comes into the dialogue, but the gist of it brings out the truth that geography cannot be learned from maps, charts, and merely reading about places. These are wholly inadequate to give correct conceptions of even the primary geographical problems. The only way to learn accurately the type forms in geography is by observation and experience directly connected with the things to be learned. With these theories in mind, von Raumer went to Nuremberg and attempted to put them into practice in his teaching of geography. He says that the experiment was a total failure, due to the fact that the boys did not want to draw the maps, even though the walks around the neighborhood had been very pleasant. He had thought after an accurate observation of the neighborhood the boys would be ready to draw the maps with accuracy and pleasure. Von Raumer concluded that his theory of geographical instruction was wrong, which may have been true in part, but the main cause of the failure is to be found in the fact that the boys were not used to representing their observations by means of drawing. The habit of graphic representation has to be acquired in the same way as other habits, and this habit the boys had not yet acquired. At Erlangen, von Raumer modified his plan somewhat by using the pupils' knowledge of their surroundings as means of introducing them to the study of maps. For example the pupils were handed a large map of the city and told to pick out their own homes, familiar streets, the churches, and other public buildings. This proved a very popular plan. It is easy to see why, for here we have introduced the game element. After the general map was

studied the pupils took a detailed map of the city and studied it in the same way. Then the map of the vicinity of Erlangen, Middle Franconia, Germany, finally Europe, and the world. All of this is place geography, but it was an improvement on the kind which was being taught generally in Germany. Von Raumer complained that the arrangement of the material in the textbooks was very poor, in fact, without any system. He makes a quotation from the favorite manual of Stein, which had gone through fourteen editions, and which was considered one of the best geographies of the time. The quotation is about German mountains and lakes, and is as follows:

The principal mountains are the Harz (Bracken, 3,945 feet high); Schwarzwald (Feldberg, 4,610 feet); the Rocky Alps, the Rhaetian and Noric Alps (Orteles, or Ortles, 14,814 feet; Grossglockner, 11,982 feet; Hochhorn, 10,667 feet; Platey-Kugel, 9,748 feet; Watzman, 9,150 feet; the Carinic and Julian Alps (Terglon, 10,845 feet); the Fichtelgebirge, the Schneeberge, 3,468 feet; the Kahlenberg the Birnbaumerwald, the Sudetic Alps, and Riesengebirge (Riesenkoppe, 4,950 feet); the Moravian Mountains (Spieglitzer, Schneeberg, 4,280 feet); part of the Carpathian, connected by low heights with the Moravian and Sudetic chains, the Thuringian Mountains, the Erzgebirge, the Spessart, the Rhone mountains, the Böhmerwald (Rachel, 3,904 feet, Arber, 4,500 feet); the Wesergebirge, Westerwald, Odenwald, Ardennes, Vosges, Hunsrück, etc. Lakes: Lake of Constance (7 miles long, 3 miles broad, and more than three hundred fathoms deep), Chiemsee, Lake of Cerknitz, the salt and sweet Lake of Mansfeld, the Lakes of Mecklenburg, Brandenburg, and Pomerania, the Drümmensee, the Trinnstätter and Hallstätter in Archducal Austria. The Steinhuder Lake.⁷

It would be impossible to find a better example of complete confusion than the above quotation, and yet, an examination of the textbooks of the time fully warrants von Raumer's criticism. More than that, it verifies the fact that the quotation fully represents material found in the textbooks of his time. He makes another point against them, namely, that it is impossible to tell important facts from relatively unimportant ones, as they are all put together without any regard to value. Indeed, in many cases unimportant facts are mentioned and the more important ones left out entirely. For example, in the description of Cologne

reference is made to the perfume manufactured there but no mention is made of the cathedral. This was the state of geography-teaching in Europe as late as 1831 when von Raumer wrote his *Manual of General Geography* in which he tried to remedy some of the deficiencies of the books just mentioned. In the main, this new textbook follows the plan outlined and first used at Erlangen. To complete the reform he adds his second book, *The Description of the Earth's Surface*, etc. This last was a book for beginners. It seems, however, that these new books did not affect practice to any considerable extent. The reason for this is that they overlap the period of Ritter's work and influence.

Our discussion has related mainly to Swiss and German reformers and the practice in these two countries. It is not necessary to discuss the other countries of Europe since they all lag some years behind the progress of Switzerland and Germany in the study and teaching of geography, and it may be added in the whole matter of the development of educational methods. The only proof necessary for the above statement is to cite the fact that practically all the nations of Europe sent students to visit Pestalozzi's school at Yverdon, Fellenburg's school at Hofwyl, and the other experimental schools being conducted in Germany. Krüsi tells us that France, Spain, Russia, England, and even the United States sent students to study in these schools. The theories and methods, to be sure, did not affect France much till after the Franco-Prussian war. Spain and Russia were not affected at all because of the interference of the home governments. In England we find three of Pestalozzi's pupils, namely, Dr. Mayo, Reiner, and Herman Krüsi, Jr., trying to carry out the Pestalozzian methods. They first attempted schools on an independent basis, but later, in 1836, under the patronage of the Home and Colonial Society. A training school was established at Gray's Inn Road and another at Battersea near London. The only thing of note in connection with these schools in the matter of geography-study was the "Lessons on Objects" in which the pupils studied the schoolroom, the school premises and buildings, and, finally, took excursions

into the surrounding fields as a means of securing interest. It should be noted, however, that these are only training schools for teachers and the whole number of England's schools was influenced very slightly by them.⁸

It is easy to understand the reason for Germany's great progress in the matter of methods in her schools, for this was just after Fichte's great address to the German nation when she had been crushed by the Napoleonic wars. Fichte urges the government to turn its attention to the schools as a means of redeeming Germany. His advice was accepted, and all the world knows the results both in so far as the schools are concerned and the nation's reconstruction.

2. Physiographical Geography and Its Human Relations

This type of geography was brought into scientific form by the world's most eminent geographer, Karl Ritter (1779-1859). Ritter was fortunate both in his teachers and his friends. Among his teachers he had the great Salzman at the famous Schnepfenthal school for eleven years. Both the school and its surroundings on the border of the Thuringian Forest made a profound impression on his character. Here he learned to love all primitive nature-forms. His course of study was in the modern languages rather than in the ancient, being altogether of a practical sort. At the close of his stay with Salzman fortune again favored him, for Herr Hollweg, a rich merchant at Frankfort-on-the-Main, selected him as tutor for his two sons and sent him to the University of Halle for two years. During his stay at the university he had the good fortune to live in the home of Niemeyer, one of the most distinguished professors of the university and also one of the most successful educators of the time. Niemeyer was not only a successful teacher, but was interested in the fundamental principles which underlie education and had published a treatise on the art of teaching. Consequently, young Ritter was daily under the influence of a real teacher and it seems natural that he should adopt the profession of teaching. As soon as he finished his studies at the university, he took up his duties as tutor for Herr Hollweg's two sons at Frankfort. This city was one of

the centers of wealth and culture in Germany and his position as tutor in the Hollweg family at once gave him entrée into the best society of the city. More than that, he retained the friendship of the Hollweg family throughout his life. One of the sons afterward became a colleague of Ritter in the University of Berlin. While still acting as tutor to the Hollweg children he made a visit to Switzerland, taking the children with him. On this first trip he spent seven days with Pestalozzi at Yverdon. He says these were seven days of supreme enjoyment, and this was the beginning of a friendship which lasted throughout the life of Pestalozzi. Each time Ritter went to Switzerland on one of his excursions he would spend some time with his friend. We have already referred to the influence Ritter attributed to Pestalozzi in the matter of inspiring him to take up the study and teaching of geography. One other friend should be mentioned, Alexander von Humboldt (1769-1859), whom he met for the first time in Frankfurt soon after his first visit to Switzerland, which occurred in 1811. It is not possible to estimate the value of this friendship to Ritter, for von Humboldt was the greatest and broadest scientist of his generation. He was interested in science generally but particularly in geology, natural history, and geography. Undoubtedly, Ritter learned much about geography from this great scientist, and it is not too much to say that from von Humboldt came a large share of insight which helped Ritter finally to become the world's first scientific geographer.⁹

Another thing helps to account for the equipment which made possible the career of Ritter. After his first journey to Switzerland in 1811 it was his custom each year to make some journey or journeys to increase his first-hand knowledge about geographical forms and conditions. During these years he made many visits to Switzerland and Italy, also crossed France in all directions; visited Greece, Bulgaria, Hungary, Turkey, Denmark, Austria, Norway, Sweden, England; explored the Pyrenees and visited London, Vienna, and Paris many times. No doubt the reflex influence of these visits upon the countries was very great. However, there is no accurate way to estimate it.

Finally, his opportunity was great, for continental Europe was just beginning to settle down after the Napoleonic wars when he began his career. The conditions in Europe were ripe for the construction of new theories about science, and the study of geography conformed to the spirit of the times.

The real teaching career of Ritter began with his appointment as "*professor extraordinarius*" of geography in the University of Berlin in 1820, which position he continued to occupy till his death. The professorship itself is unique, for it is virtually the first time that geography is put on such a basis in the curriculum of the modern university. Ritter began his work with no hearers at the opening of the course and only a very few at its close. However, before three years, his lecture-room was full and he continued to be one of the most popular lecturers at the university throughout his life. At the very beginning of his teaching he worked out his theories of geography on a thoroughly scientific basis, and so carefully was this done that it won for him the distinction of being called the founder of modern scientific geography. The limits of this paper will allow only a brief statement of his fundamental principles. They may be summarized as follows: (1) Physiography is the real basis of geography; (2) the earth is the arena for the development of human life and history; (3) man and his education are the center of interest in geography and all other factors cluster around his destiny; (4) earth-forms do not come by accident, they are the result of an all-wise plan; (5) the country affects the life of the people; (6) God and his laws are behind the development of the earth as the home for man; (7) geography as a science has for its problems the discovery of these laws of the earth's evolution and the proper appropriation of the earth's resources for the greatest possible development of the human race. ^{10, 11}

With these principles as a working-basis, geography is no longer a great body of unrelated facts but becomes at once a fund of living material which includes the whole history of the development of the human race, and such was Ritter's thought. Nature and man in interaction—these are with Ritter

inseparable. Consequently, he does not try to separate history and geography. This conception no doubt accounts for the fact that in most European countries even to the present time we find the two subjects being taught together.¹² This is particularly true of Germany and Switzerland. By way of parenthesis it might be added that a few of Ritter's followers went entirely over to geology as the controlling factor in man's and nations' destinies. However, this does not represent the real trend of Ritter's thinking.

With reference to method, it is to be noted that Ritter advocated the synthetic, rather than the analytic, type of study. An important device with him was the excursion, which has been adopted by all European countries but is possibly best carried on in Switzerland. Another practice which he advocates is the study of the garden in connection with the school. His theories and the practices growing out of them were adopted by all the states of Europe, not long after the middle of the nineteenth century. France adopted them after the Franco-Prussian War and England somewhat later. It is one of the strange facts of geography-study and -teaching that England, with a'l of her natural facilities, and interest in travel and exploration, lagged so long behind. As late as 1882 Geikie¹³ complains that the subject has not received anything like the attention in England which had been given to it in Germany. However, five years later he reports much progress in the methods of teaching geography in England, due in part to his own books and efforts, but no doubt in large measure also to the establishment of chairs of geography in both Oxford and Cambridge. Geikie adopts the theories of Ritter, as he takes the "earth as the dwelling-place of man" as one of the fundamental theses of his discussion.

3. *Industrial or Economic Geography*

Notwithstanding the great industrial progress of Germany in the last few years the course of study for the elementary school has been very little changed, and in fact it seems fair to say that Ritter's geography still prevails. However, some important changes have taken place in the secondary-school curricula.

Especially is this true of the *Realschule* which was established to meet changing industrial conditions. The same lack of progress appears in Switzerland. In France, Klemm reports that the schools of Paris give considerable time to the discussion of commercial geography. He says, "The railroad system of France and Europe is a subject of much study as could be seen from sketch-maps on the blackboard and from work done by the pupils in their journals."¹⁴ The pupils also draw maps on which are shown the places which grow the grape-vine or olive, and they prepare statistical tables showing a comparison of the principal countries of the world in area, population, armies, navies, their productions, values of exports and imports, tonnage of merchant marine, etc.

At the present time there is a very definite movement in England toward economic geography. This is in a large measure due to the interest which the universities have taken in the matter and particularly the publications which come from Oxford. The Herbertson series of geographies,¹⁵ published at Oxford in 1907, and also *Man and his Work*,¹⁶ published by the Herbertsons, are important factors in the movement. It is interesting to note the subtitle of this last book. It is *An Introduction to Human Geography*, and as we look through the book we see that the whole of geography is to be treated from the human and industrial side rather than from the side of ordinary physiological geography. In this case physiography has been treated only as a valuable auxiliary to the progress of the race. The textbooks abandon the traditional continental divisions and discuss certain natural, industrial regions, for example the region around the Mediterranean Sea. Here the main consideration is given to the broader economic problems growing out of the region. The books were published only in 1907 and it remains to be seen what influence they will exert on the methods of teaching geography in England.

SOURCES OF QUOTATIONS

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2. PAYNE. *Rousseau's "Emile,"* 136-39.

3. DE GUIMPS. *Pestalozzi and His Life-Work*, 255.
4. BARNARD. *Pestalozzi and His Educational System*, 684.
5. MONROE, W. S. *The Pestalozzian Movement in the United States*, 264.
6. KRÜSI. *The Life and Works of Pestalozzi*, 177-78.
7. BARNARD. *German Pedagogy*, 117.
8. KRÜSI. *The Life and Works of Pestalozzi*, chaps. iii, iv.
9. GAGE. *Life of Karl Ritter*.
10. RITTER. *Geographical Studies*.
11. ———. *Comparative Geography*.
12. RUSSELL. *German Higher Schools*, chap. xv.
13. GEIKIE. *The Teaching of Geography*.
14. KLEMM. *European Schools*, 362-63.
15. HERBERTSON, A. J. "Geography Series" (Vol. I, *Preliminary Geography*; Vol. II, *Junior Geography*; Vol. III, *Senior Geography*).
16. HERBERTSON, A. J. AND T. D. *Man and His Work*.